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1 UNITED STATES PATENT AND TRADEMARK OFFICE

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3  
4 BEFORE THE BOARD OF PATENT APPEALS  
5 AND INTERFERENCES  
6

7  
8 *Ex parte* STEVEN R. HOFFMAN  
9 and  
10 SUZANNE C. CUTINO  
11

12  
13 Appeal 2009-003106  
14 Application 09/587,092  
15 Technology Center 3600  
16

17  
18 Decided: November 24, 2009  
19  
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21  
22 *Before* MURRIEL E. CRAWFORD, HUBERT C. LORIN, and BIBHU R.  
23 MOHANTY, *Administrative Patent Judges*.

24  
25 CRAWFORD, *Administrative Patent Judge*.  
26

27  
28 DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134 (2002) from a final rejection of claims 1, 4-5, 7-9, 11-12, 14-15, and 23-25. We have jurisdiction under 35 U.S.C. § 6(b) (2002).

Appellants invented systems and methods for loading value and making purchases using a smart card in conjunction with a mobile telephone (Spec. 1:16-18).

Claim 1 under appeal is further illustrative of the claimed invention as follows:

1. A smart card loading system for loading value over a wireless telecommunications network onto a smart card, said smart card loading system comprising:

a smart card;

a mobile telephone handset in communication with said telecommunications network, said handset including a subscriber identification module (SIM) that is separate from said smart card and functions to allow a user to access said telecommunications network, a smart card reader for communicating with said smart card when said smart card is inserted in said handset, and an input interface for indicating a value to be loaded onto said smart card, said handset being arranged to generate a request message to load said value onto said smart card and to receive a response message to load said value onto said smart card, wherein said response message is implemented as an alphanumeric message integrated within a Short Message Service (SMS) message of said telecommunications network, said alphanumeric message serving as a command input to said smart card used to control operation of said smart card;

1 a gateway computer arranged to receive said request  
2 message from said handset over said telecommunications  
3 network and to retransmit said request message, said gateway  
4 computer being further arranged to receive said response  
5 message and to retransmit said response message to said  
6 handset;

7 a funds issuer computer arranged to receive said request  
8 message and to debit a consumer account associated with said  
9 smart card; and

10 an authentication computer arranged to receive said  
11 request message and to authenticate said smart card, said  
12 authentication computer being further arranged to generate said  
13 response message for transmission to said gateway computer,  
14 whereby said smart card is authorized to load said value via  
15 said handset.

16 The prior art relied upon by the Examiner in rejecting the claims on  
17 appeal is:

18 W. Rankl and W. Effing, *Smartcard Handbook* 21, 23, 327-53, 362-  
19 68 (1997) (hereinafter "Rankl").

20 Richard Manterfield, *Telecommunications Signalling* 141 (Jan. 1999)  
21 (hereinafter "Manterfield").

22 Appellants' arguments filed October 23, 2006, page 6 (hereinafter  
23 "Admissions").

24 Appellants' arguments filed August 9, 2007, page 9 (hereinafter  
25 ("Admissions").

26 The Examiner rejected claims 1, 4-5, 7-9, 11-12, 14-15, and 23-25  
27 under 35 U.S.C. § 103(a) as being unpatentable over Rankl, Manterfield, and  
28 Admissions.

29 We AFFIRM-IN-PART.  
30

ISSUES

Did the Appellants show the Examiner erred in asserting that Rankl discloses a mobile telephone having both a smart card and a subscriber identification module (SIM) card, as recited in claims 1, 5, 9, and 12, because Rankl only discloses phones having either a smart card or a SIM card?

Did the Appellants show the Examiner erred in asserting that three disparate smart card technologies in Rankl could be combined to render obvious the subject matter of claims 1, 5, 9, and 12, because the Examiner does not provide the technical details on how to combine the Mondex system with the GSM system of Rankl?

Did the Appellants show the Examiner erred in asserting that a combination of Rankl and Manterfield renders obvious implementing a response message or response certificate via an alphanumeric message integrated within a standard SMS message, the alphanumeric message being used to control operation of the smart card in the mobile handset, as recited in claims 1, 7, 11, and 14?

Did the Appellants show the Examiner erred in asserting that the file containing global parameters for the subsequent communication process of Rankl corresponds to the second application of “opening a second application on said smart card capable of funding said stored-value application,” as recited in independent claim 12?

FINDINGS OF FACT

*Specification*

Appellants invented systems and methods for loading value and making purchases using a smart card in conjunction with a mobile telephone (Spec. 1:16-18).

*Rankl*

Rankl discloses a system for loading value onto an inter-sector electronic purse (IEP) on a Smart Card, where a user inserts the card into a load device application (LDA) terminal. The IEP then notifies the terminal of various global parameters for the subsequent communications process. Then the terminal selects the purse DF on the card. The user then pays into the terminal the amount to be credited in the acceptable currency. The purse provider SAM (PPSAM) checks the specified currency unit and the amount still possible to load. The terminal then sends to the IEP card an instruction INITIALIZE IEP to perform tests on the card. If the tests are successful, the card is authenticated, and then the PPSAM prepares a signature  $S_2$  and sends it to the terminal together with the key information  $IK_{PPSAM}$  with the instruction CREDIT IEP. The card authenticates the PPSAM using this data, and then the balance is updated in the purse (p. 337).

Rankl also discloses the Mondex system including an electronic purse, which is located in the chip of a conventional ID-1 card with contacts. The card is designed to be used with a telephone with a built-in card reader. It allows money to be transferred over the line during a call, for example, paying for mail-order goods or loading the purse over the phone. When loading the card from a bank account, a four-figure PIN must, of course, be

entered at the same time for security reasons, to protect the account holder against unauthorized withdrawals (p. 344).

Rankl further discloses a GSM network which includes switching station and base station systems. At the highest level in the hierarchy is the authentication centre, which is the sole authority in control of the necessary keys and algorithms for authenticating mobile stations (i.e., the SIMS) (p. 363).

GSM allows the SIM to take two different card formats. ID-1 is used in mobile phones which replace the SIM frequently. The SIM's task is to permit network access only to authorized persons. The following functions are necessary here: data storage, protection of access to this data and execution of cryptographic algorithm under secure conditions (p. 364).

Short text messages arriving over the network can be stored in the SIM and read out as necessary (p. 364).

SIM identification is based on a number unique across the whole GSM, which is no more than 8 bytes long and is known as IMSI (International Mobile Subscriber Identity). The subscriber can thus be identified by the system worldwide, on all GSM networks (p. 364).

## PRINCIPLES OF LAW

### *Obviousness*

One cannot show non-obviousness by attacking references individually where the rejections are based on combinations of references. *In re Keller*, 642 F.2d 413, 426 (CCPA 1981).

Once a prima facie case of obviousness is established, the burden shifts to Appellant to rebut it. *Id.*

ANALYSIS

*Both Smart Card and SIM Card*

We are not persuaded of error on the part of the Examiner by Appellants' argument that because Rankl only discloses phones having either a smart card or a SIM card, Rankl does not disclose a mobile telephone having both a smart card and a subscriber identification module (SIM) card, as recited in claims 1, 5, 9, and 12 (App. Br. 5-8; Reply Br. 2-3). Rankl discloses the Mondex system which includes an ID-1 card (i.e., "smart card") designed to be used with a telephone having a built-in card reader. Using this telephone, value is loaded onto the smart card. Rankl also discloses a SIM card used with GSM-enabled mobile phones. The SIM card is used to authenticate the mobile phone on the GSM network. The Examiner asserts that it would have been obvious to combine the two embodiments of Rankl so as to result in "a mobile telephone handset with a SIM (to allow connection to telecommunication network) and a smart card (to contain funds)" (Ex. Ans. 7-8, 15). Accordingly, the rejection is based on a *combination* of at least two embodiments in Rankl. *See In re Keller*, 642 F.2d at 426. The Examiner's rationale for combining the two embodiments is reasonable, and thus the Examiner has established a proper case of prima facie obviousness for a mobile telephone with both a smart card and a SIM card. *See Id.* Accordingly, insofar as the Appellants argue that each individual embodiment in Rankl lacks both a smart card and a SIM card, those arguments are not persuasive.

In rebuttal to the combination, the Appellants argue that the Examiner's proposed combination does not take into consideration the claimed interaction between the smart card and the SIM card (Reply Br. 3).



1 However, the Mondex system, using a conventional telephone, receives  
2 authentication messages, from an authenticating entity such as a bank,  
3 authorizing the loading of value onto the smart card. The proposed  
4 combination simply interposes a SIM card between the authenticating entity,  
5 such as a bank, and the application that loads value onto the smart card.  
6 Accordingly, the authenticating message would merely be passed through  
7 the SIM card. We note that the Appellants have not presented specific  
8 technical arguments as to any particular problems that may be encountered  
9 in relaying the authenticating message from the authenticating entity to  
10 value loading application via the SIM card.

11  
12 *Three Disparate Technologies*

13 We are not persuaded of error on the part of the Examiner by  
14 Appellants' argument that because the Examiner does not provide the  
15 technical details on how to combine the Mondex system with the GSM  
16 system of Rankl, the three disparate smart card technologies in Rankl cannot  
17 be combined to render obvious the subject matter of claims 1, 5, 9, and 12  
18 (App. Br. 7-10; Reply Br. 3-4). As set forth above, the Examiner's proposed  
19 combination of at least two embodiments in Rankl merely interposes a SIM  
20 card between the authenticating entity, such as a bank, and the application  
21 that loads value onto the smart card. Absent any specific arguments as to  
22 why this would not technically be possible or beyond abilities of one of  
23 ordinary skill, we will sustain this rejection.

1           *SMS Messages*

2           We are not persuaded of error on the part of the Examiner by  
3 Appellants' argument that a combination of Rankl and Manterfield does not  
4 render obvious implementing a response message or response certificate via  
5 an alphanumeric message integrated within a standard SMS message, the  
6 alphanumeric message being used to control operation of the smart card in  
7 the mobile handset, as recited in claims 1, 7, 11, and 14 (App. Br. 10-11;  
8 Reply Br. 4-5). The Appellants assert that the SMS messages in Manterfield  
9 are only meant to be read by humans, while the recited claims intend for the  
10 SMS messages to be used to control operation of the smart card. However,  
11 we are not persuaded that the SMS messages are so limiting. Rankl  
12 discloses that alphanumeric commands such as INITIALIZE IEP and  
13 CREDIT IEP<sup>1</sup> are sent from the authenticating entity to the application that  
14 loads value onto the smart card. However, the exact format of how the  
15 messages are sent is not disclosed. The Examiner has cited Manterfield as  
16 disclosing that SMS messages are a known way of sending alphanumeric  
17 messages, and Rankl discloses that the SIM card stores such messages and  
18 reads them out as necessary, for example, when necessary to control the  
19 smart card. SMS messages are merely a means for two entities, human or  
20 artificial, to communicate. Accordingly, absent specific technical arguments  
21 by Appellants as to any particular problems that may be encountered in

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<sup>1</sup> Appellants assert that the terms INITIALIZE IEP and CREDIT IEP are not literally sent as messages. Instead, the messages are other forms of data, such as 64-bit keys, with the effect of initiating an INITIALIZE IEP or CREDIT IEP command on the smart card. While we agree with the Appellants, the data that has the same effect as the INITIALIZE IEP or CREDIT IEP commands are still sent in the form of alphanumeric messages.

1 using SMS messages to control a smart card, we are not persuaded the  
2 Examiner's proffered combination does not render obvious the subject  
3 matter of claims 1, 7, 11, and 14.

4  
5 *Second Application*

6 We are persuaded of error on the part of the Examiner by Appellants'  
7 argument that the file containing global parameters for the subsequent  
8 communication process of Rank1 does not correspond to the second  
9 application of "opening a second application on said smart card capable of  
10 funding said stored-value application," as recited in independent claim 12  
11 (App. Br. 11-12; Reply Br. 5). The global parameters of Rank1 allow an  
12 application *on the terminal* to communicate with and load value onto the  
13 smart card. However, independent claim 12 recites that the application for  
14 funding the stored-value application is located *on the smart card*, for  
15 example, the credit or debit application on page 15 of the Specification  
16 referenced by Appellants on page 5 of the Reply Brief. Accordingly, we  
17 will not sustain this rejection.

18  
19 **CONCLUSION OF LAW**

20 On the record before us, Appellants have shown that the Examiner  
21 erred in rejecting claims 12, 14, and 15.

22 On the record before us, Appellants have not shown that the Examiner  
23 erred in rejecting claim 1, 4-5, 7-9, 11, and 23-25.

DECISION

The decision of the Examiner to reject claims 12, 14, and 15 is reversed.

The decision of the Examiner to reject claims 1, 4-5, 7-9, 11, and 23-25 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a) (2007).

AFFIRMED-IN-PART

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